

CORRECTED VERSION

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
9 September 2005 (09.09.2005)

PCT

(10) International Publication Number  
WO 2005/083389 A1

(51) International Patent Classification:  
G01N 15/02 (2006.01)

(21) International Application Number:  
PCT/IB2005/000411

(22) International Filing Date:  
18 February 2005 (18.02.2005)

(25) Filing Language: Italian

(26) Publication Language: English

(30) Priority Data:  
TO2004A000100 20 February 2004 (20.02.2004) IT

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(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY,  
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,  
ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

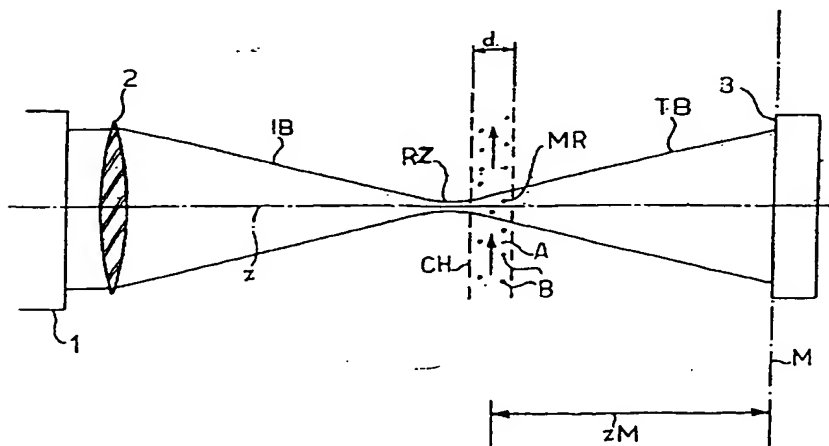
— as to applicant's entitlement to apply for and be granted a  
patent (Rule 4.17(ii))

Published:

— with international search report

[Continued on next page]

(54) Title: A METHOD FOR MEASURING PROPERTIES OF PARTICLES BY MEANS OF INTERFERENCE FRINGE ANAL-  
YSIS AND CORRESPONDING APPARATUS



(57) Abstract: A method of measuring properties of particles comprises the steps of: generating a beam of radiation (IB) which is propagated along a principal axis (z), illuminating with the beam (IB) an observation region (MR) with particles (B), a portion of the beam (IB) giving rise to radiation (SW) which is scattered by interaction of the portion of the beam (IB) with the particles (B) and another portion (TB) being transmitted substantially undisturbed through the observation region (MR), and detecting, in a plane (M) disposed on the propagation axis (z), radiation intensity values which are determined by the interference between the scattered radiation (SW) and the transmitted radiation (TB). The method further comprises the steps of: identifying systems of interference fringes associated with the particles (B) in which the interference pattern is affected by a phase delay of the scattered radiation (SW) relative to the transmitted radiation (TB), the delay being determined by the interaction of the radiation beam (IB) with the particles (B), and determining the properties of the particles (B) on the basis of the lower-order interference fringes.

WO 2005/083389 A1



(48) Date of publication of this corrected version:

22 June 2006

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(15) Information about Corrections:

see PCT Gazette No. 25/2006 of 22 June 2006

Previous Corrections:

see PCT Gazette No. 11/2006 of 16 March 2006

see PCT Gazette No. 50/2005 of 15 December 2005